

ABSTRACT

An adaptive halftoning method where the difference between a digital image and a filtered digital image is introduced into the system on a pixel by pixel basis is disclosed. In this method, each input difference pixel has a corresponding error value of the previous pixel added to the input value at a summing node, resulting in modified image difference data; the modified image difference data is passed to a threshold comparator where the modified image difference data is compared to a threshold value, the threshold value varying according to the properties of the digital image, to determine the appropriate output level; the output level is subtracted from the modified image difference value to produce the input to an error filter; the output of the error filter is multiplied by an adaptation coefficient, where the adaptation coefficient varies according to the properties of the digital image, to generate the error level for the subsequent input pixel; and, the cyclical processing of pixels is continued until the end of the input data is reached.